

KIC 006105359

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
006105359-01	OBS	8116.01	235.565050	191.215767	305.3	11.502	7.1	7.2	1.25	5533	2.39	2.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006105359-01	OBS	FP	0.25	1	0	0	0	INDIV_TRANS_MARSHALL—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

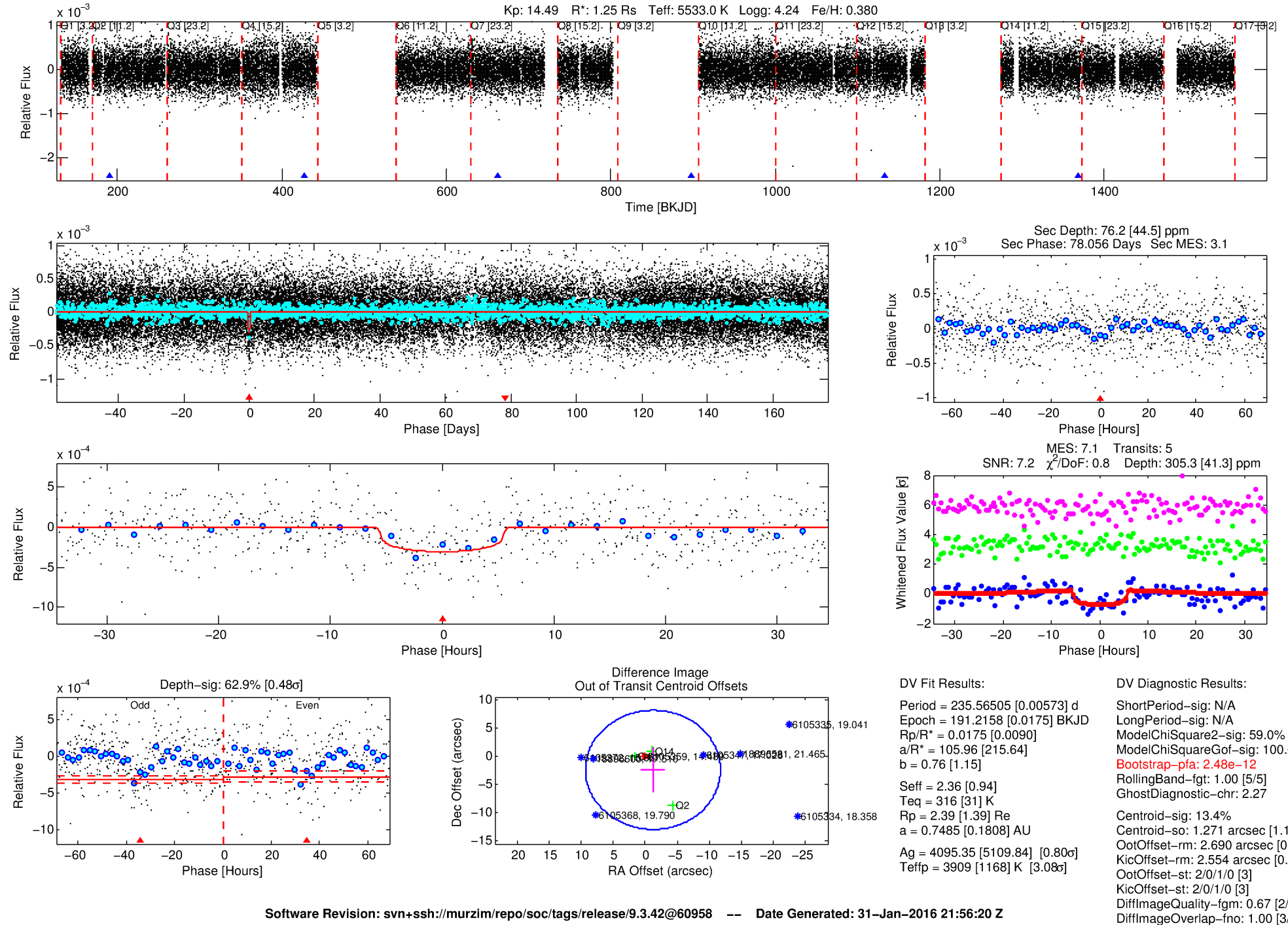
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006105359-01

No Significant Match Found

DV One-Page Summary

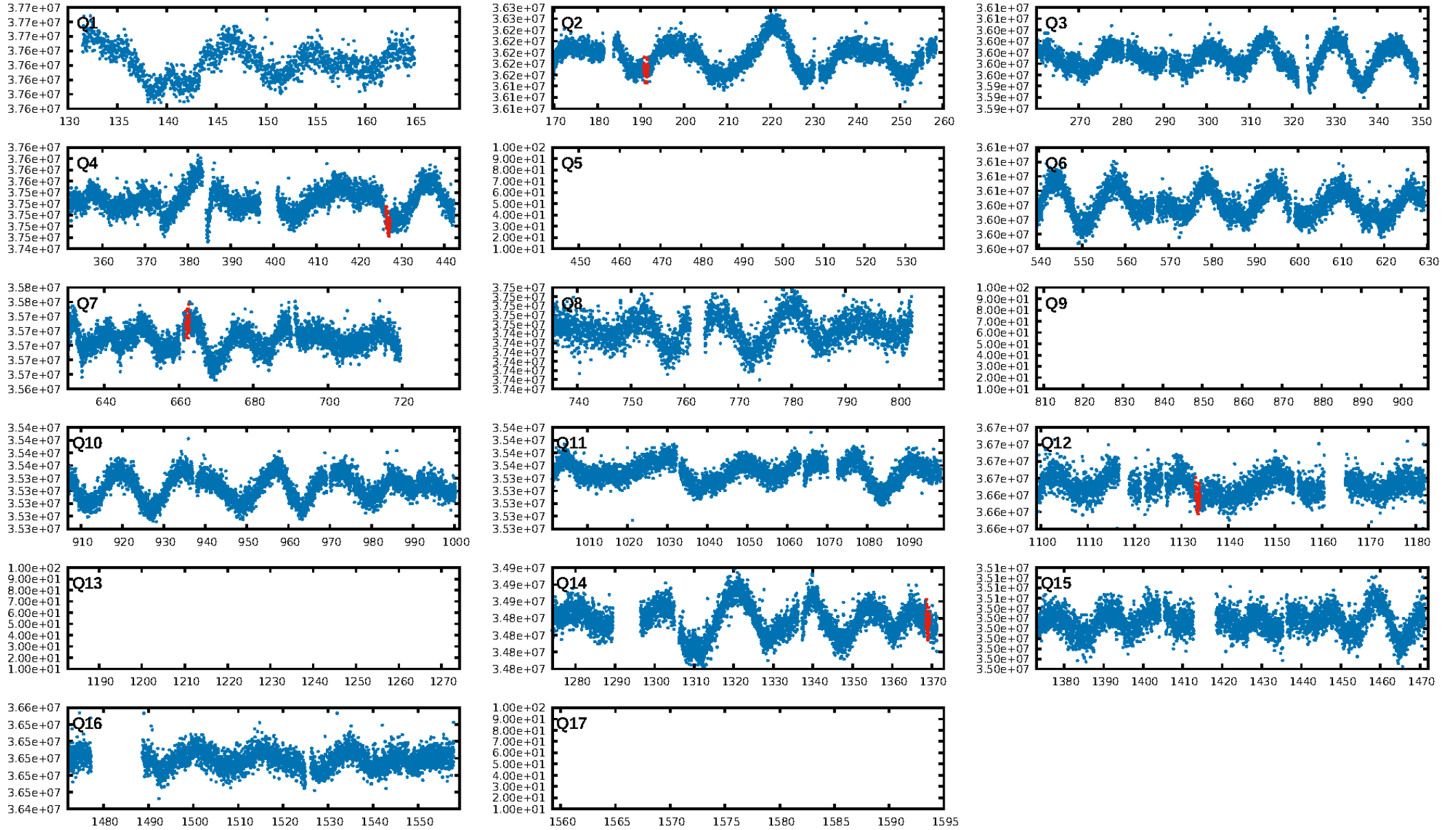
KIC: 6105359 Candidate: 1 of 1 Period: 235.565 d



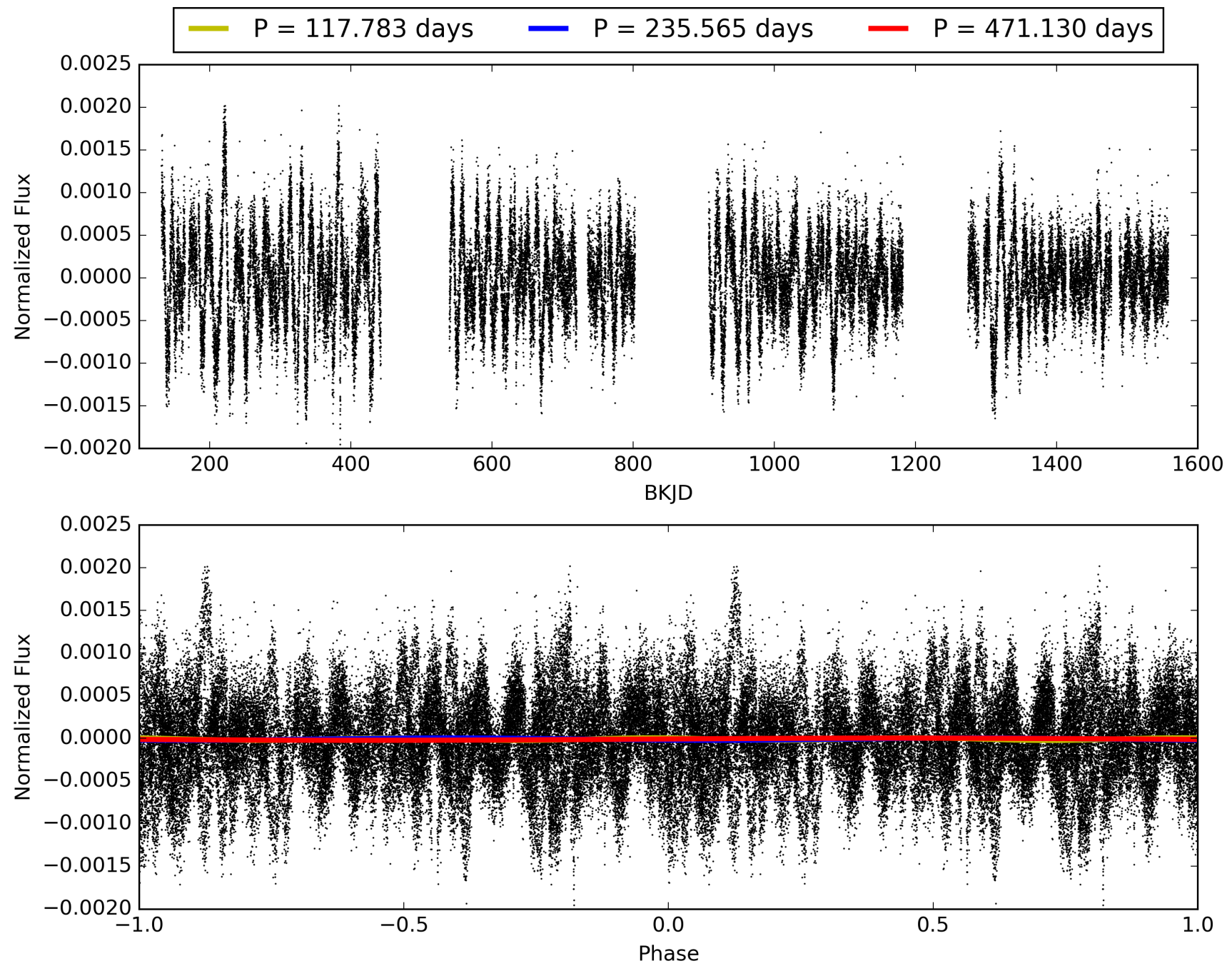
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:56:20 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006105359-01, PDC Light Curves

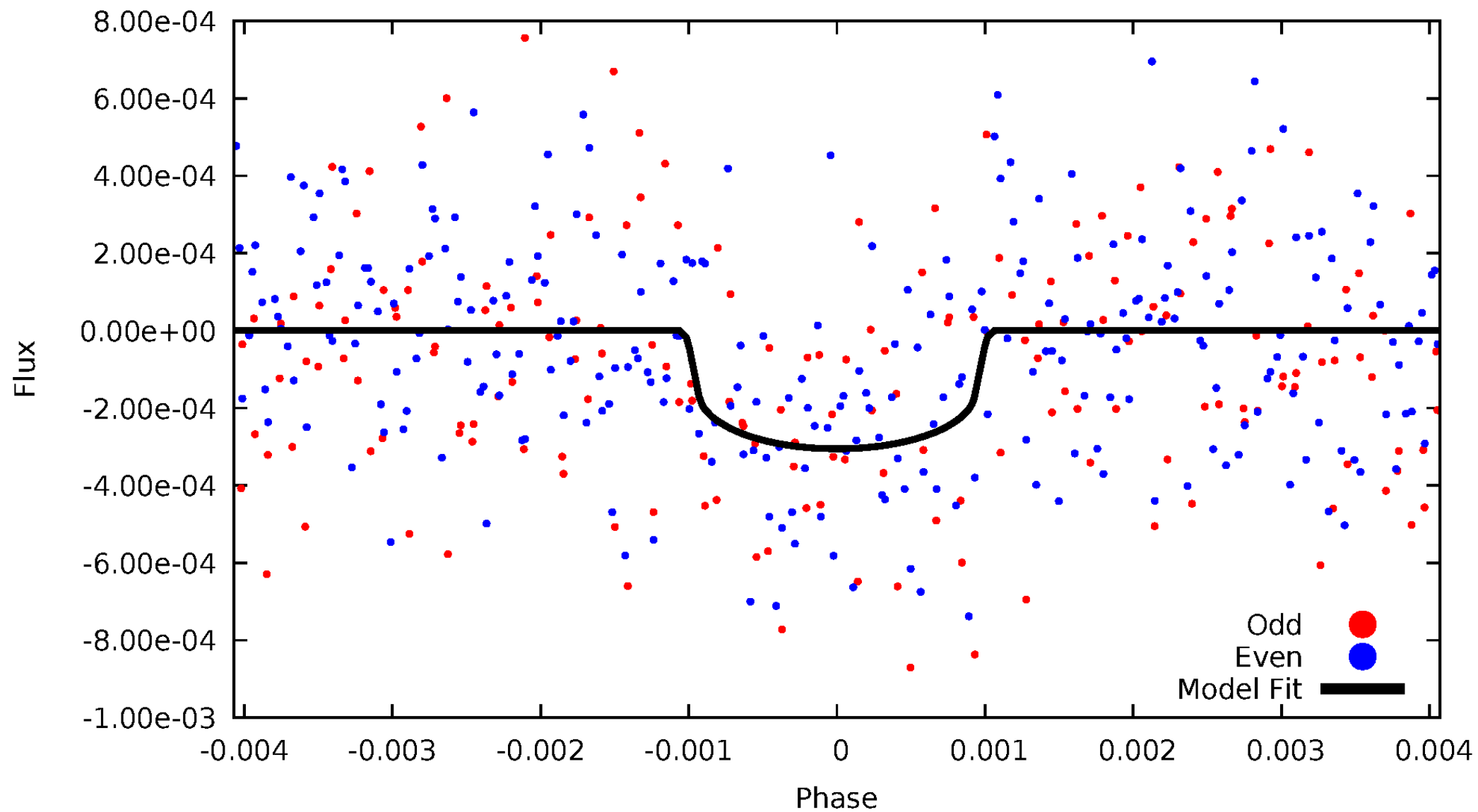


TCE 006105359-01



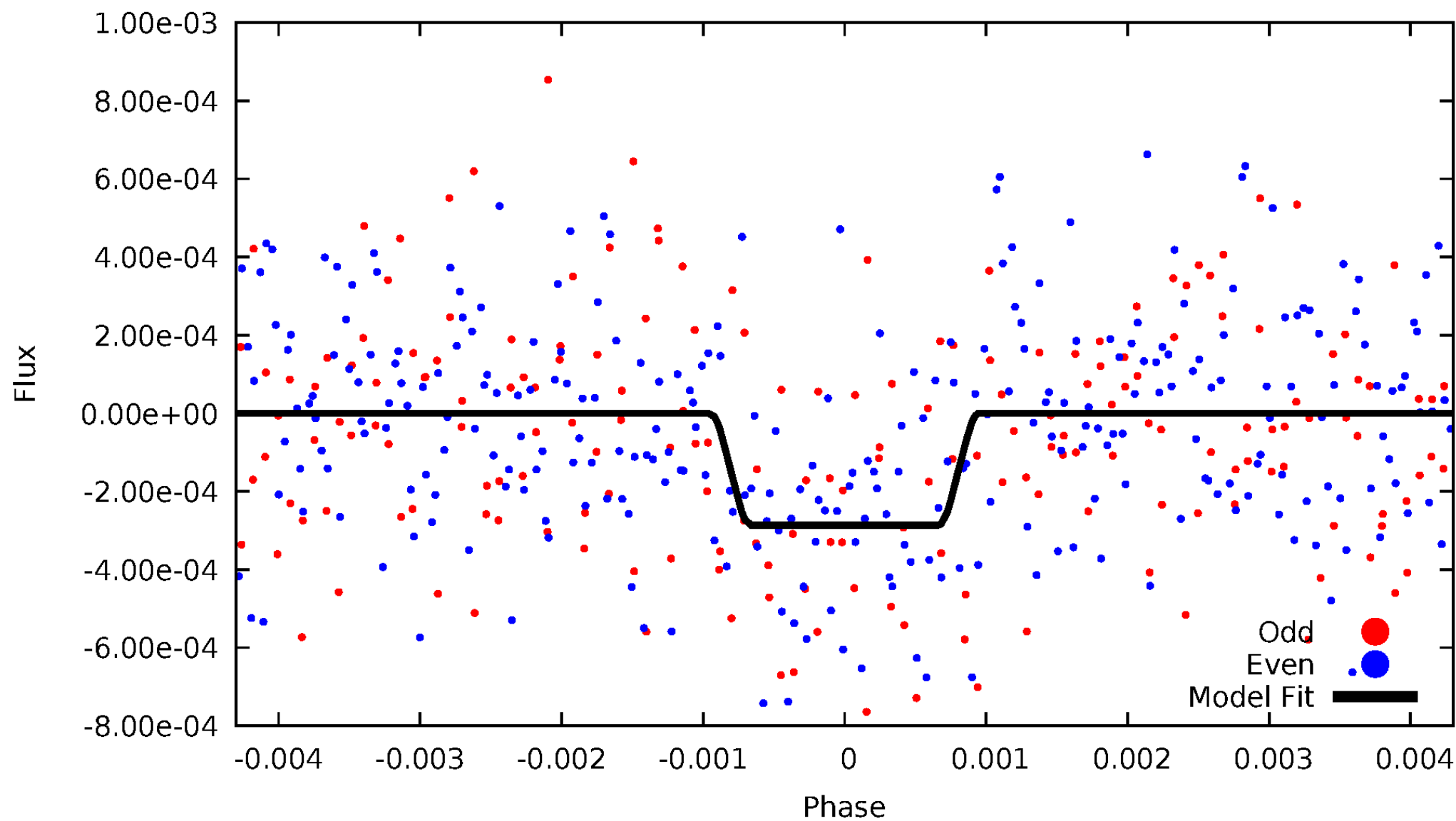
DV Odd/Even

TCE 006105359-01

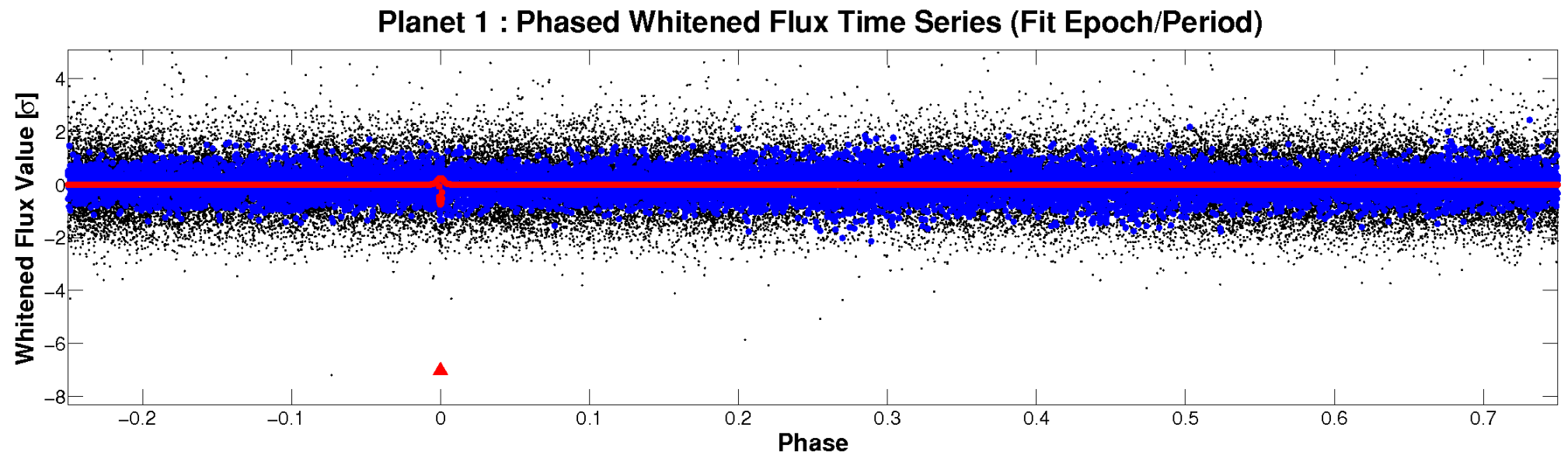
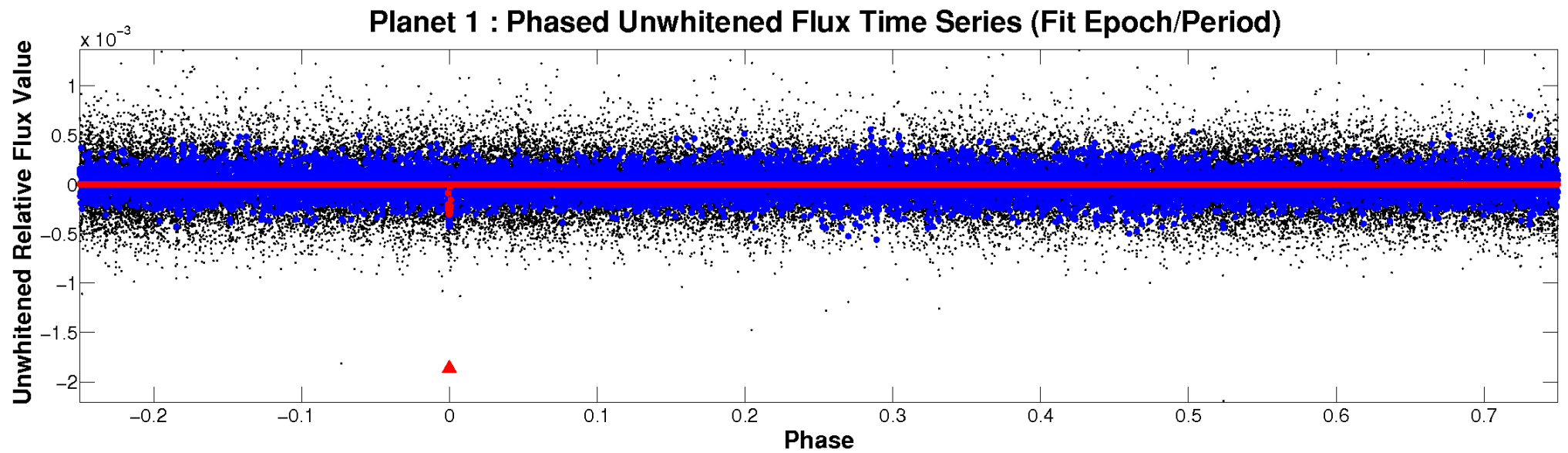


ALT Odd/Even

TCE 006105359-01

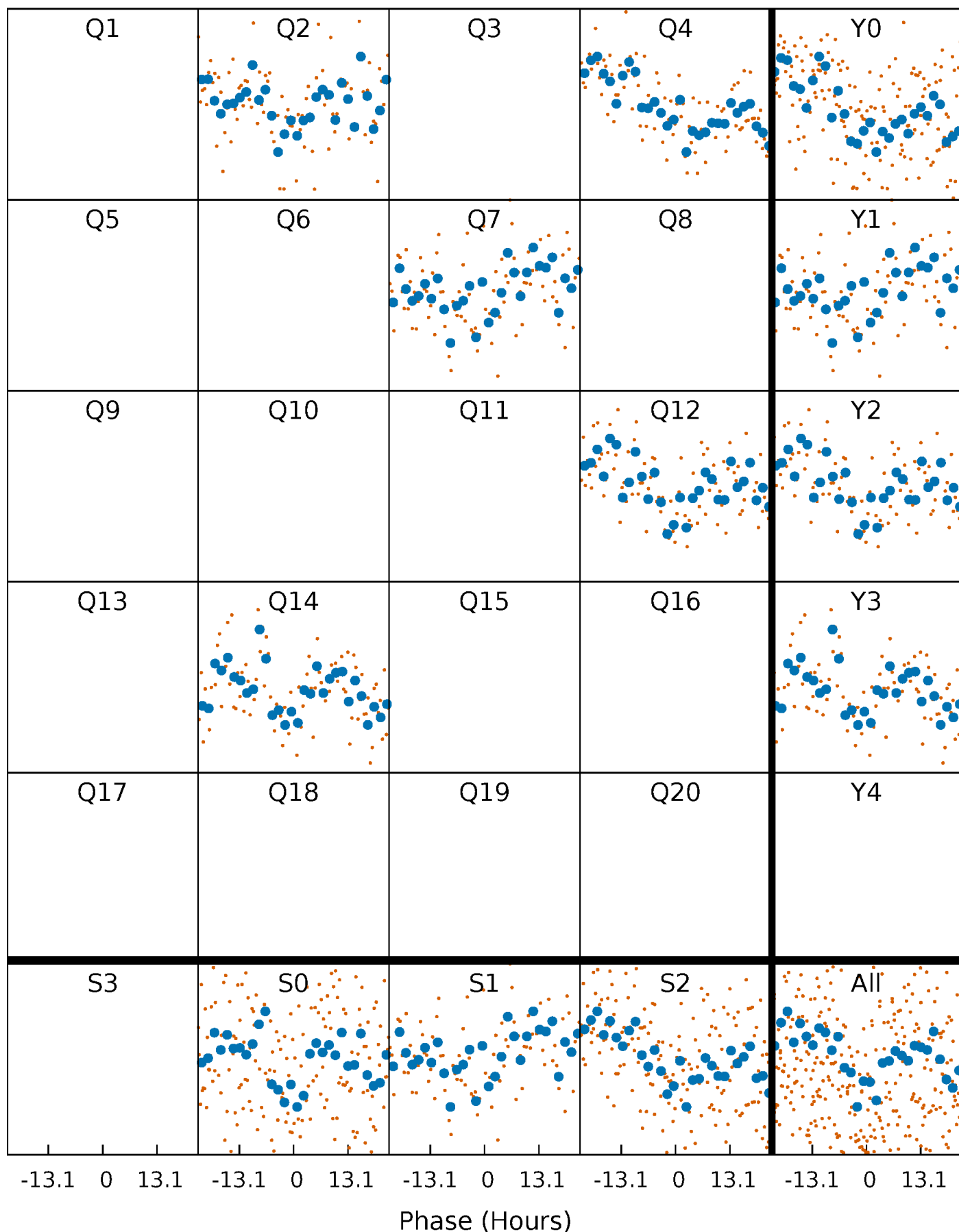


Non-Whitened Vs. Whitened Light Curve



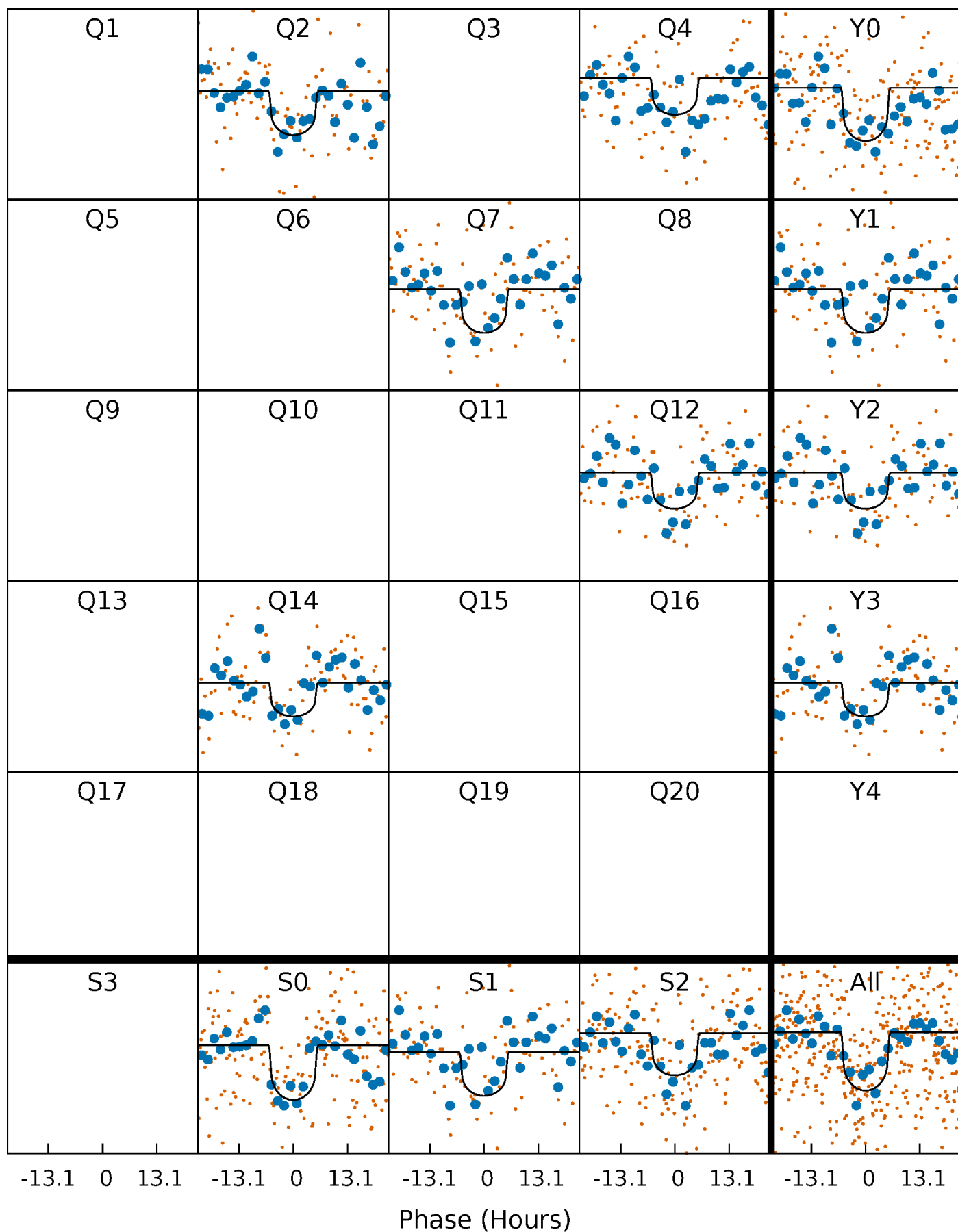
PDC Quarter-Phased Transit Curves

TCE 006105359-01 P=235.565050 Days $T_0=191.215767$ (BKJD)



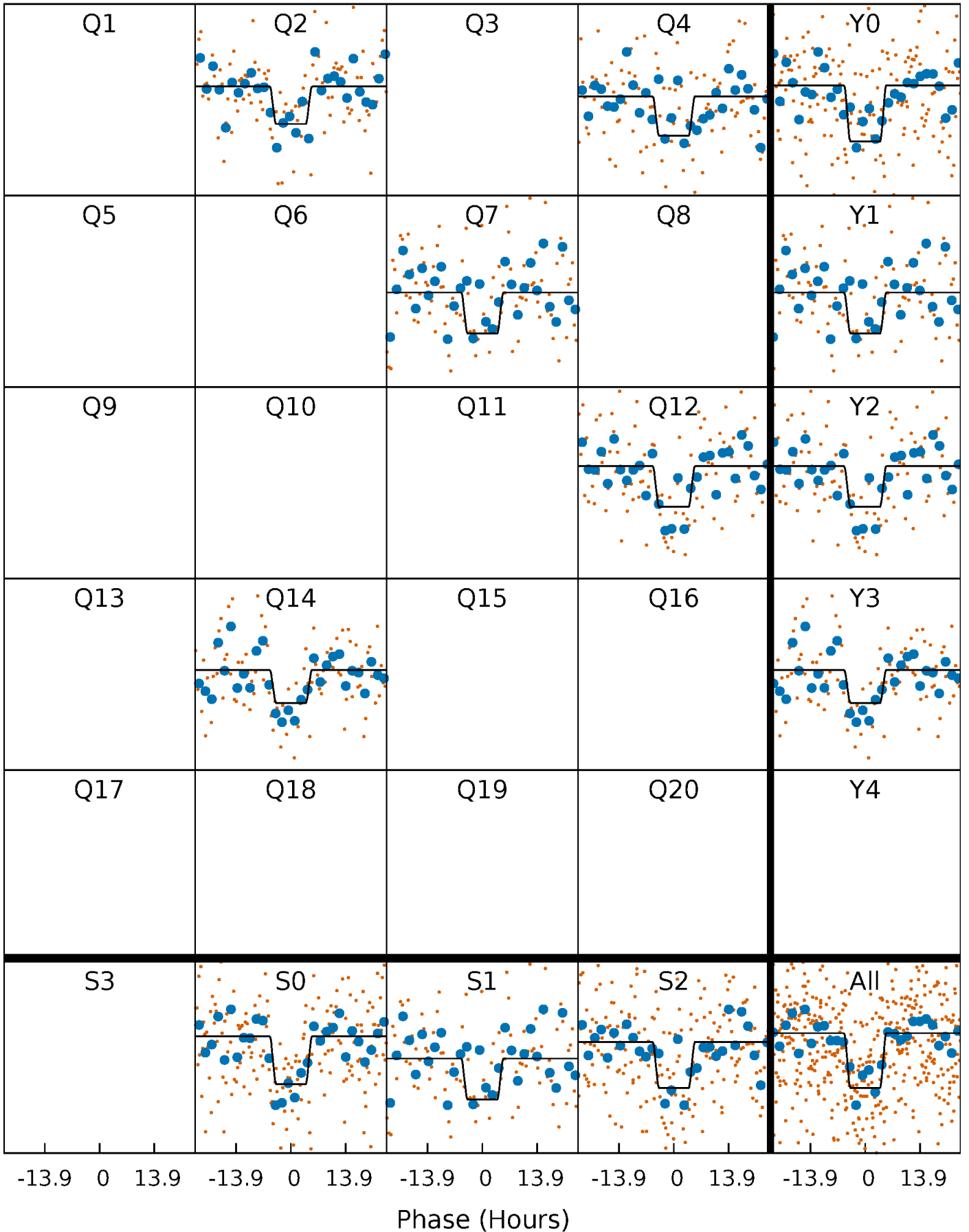
DV Quarter-Phased Transit Curves

TCE 006105359-01 P=235.565050 Days $T_0=191.215767$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

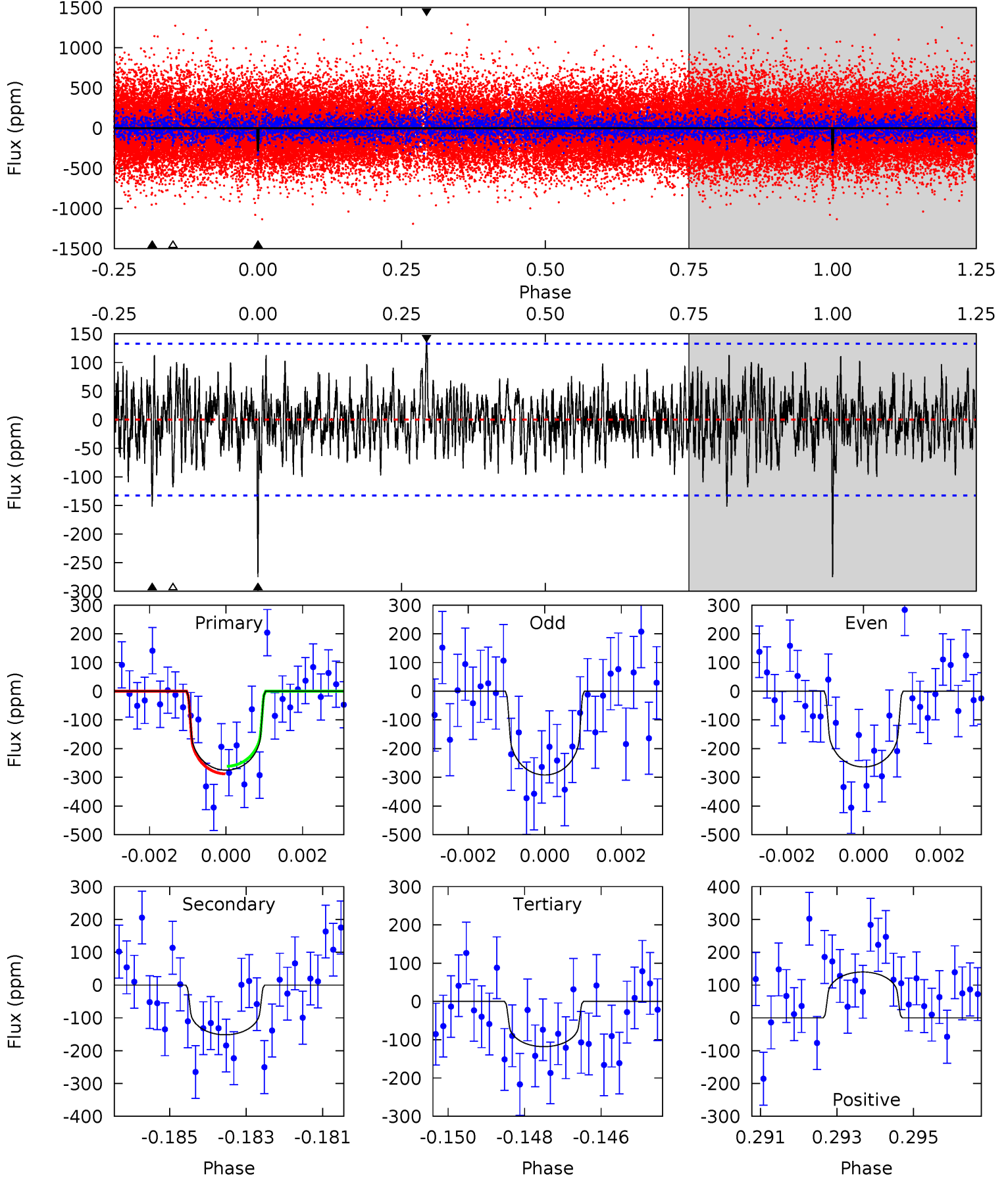
TCE 006105359-01 P=235.564891 Days $T_0=191.213404$ (BKJD)



DV Model-Shift Uniqueness Test

006105359-01, P = 235.565050 Days, E = 191.215767 Days

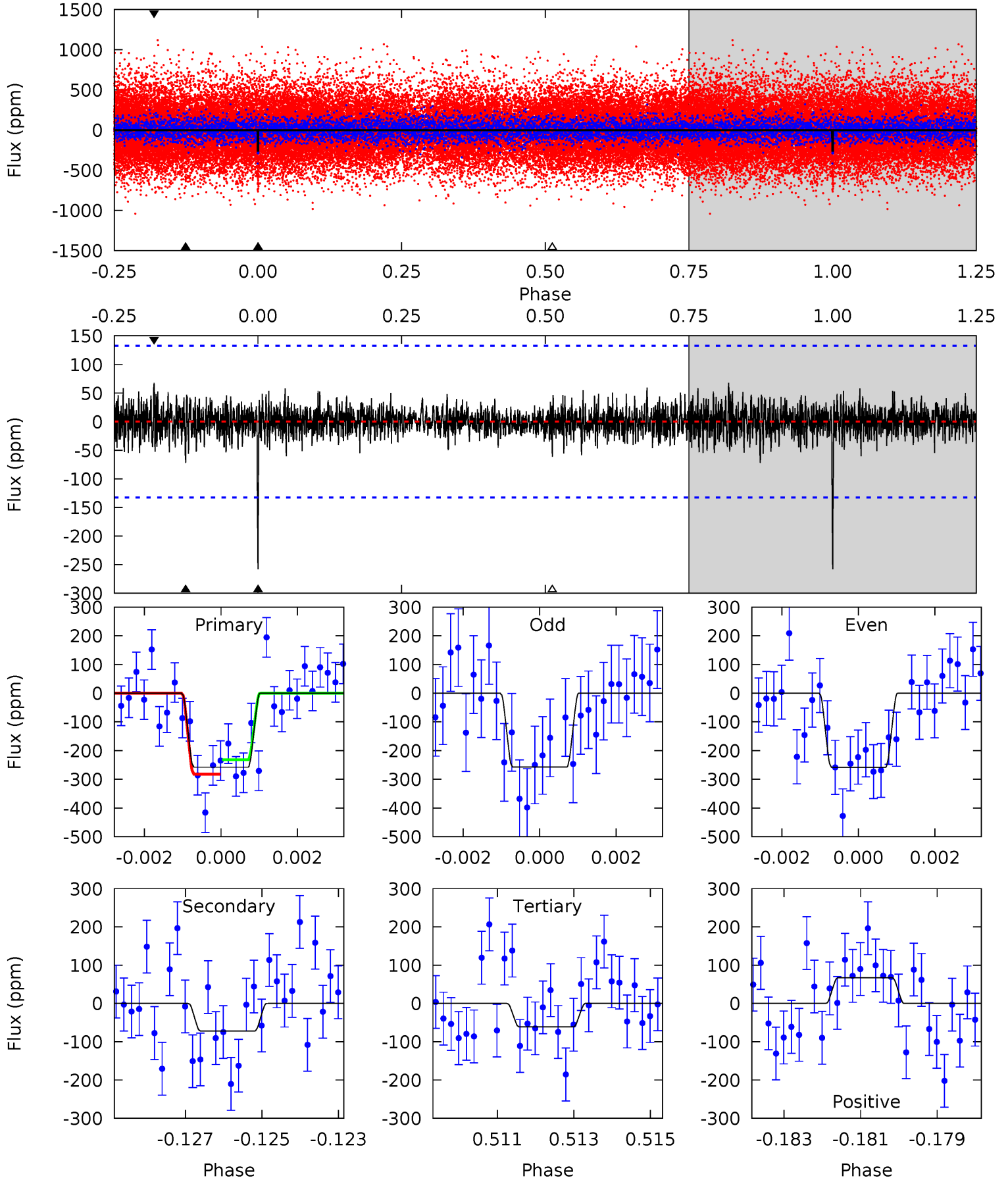
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	6.08	4.74	5.61	5.32	3.08	1.48	6.30	5.43	1.35	0.47	0.55	0.87	0.34	0.53



Alt Model-Shift Uniqueness Test

006105359-01, P = 235.564891 Days, E = 191.213404 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	2.90	2.47	2.71	5.34	3.11	0.73	7.91	7.66	0.44	0.19	0.01	0.93	0.21	1.02



Stellar Parameters For KIC 006105359

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5533^{+166}_{-166}	$4.244^{+0.220}_{-0.160}$	$0.380^{+0.050}_{-0.300}$	$1.255^{+0.325}_{-0.325}$	$1.009^{+0.094}_{-0.094}$	$0.718^{+0.853}_{-0.343}$
	+3%/-3%	+5%/-4%	+13%/-79%	+26%/-26%	+9%/-9%	+119%/-48%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006105359-01 / KOI 8116.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-152 ± 25	$2.38^{+1.24}_{-1.17}$	441^{+30}_{-33}	4756^{+1687}_{-731}	8445^{+23241}_{-5007}
Alt.	-72 ± 25	$2.37^{+1.25}_{-1.15}$	441^{+33}_{-34}	4097^{+1304}_{-577}	3827^{+11746}_{-2318}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

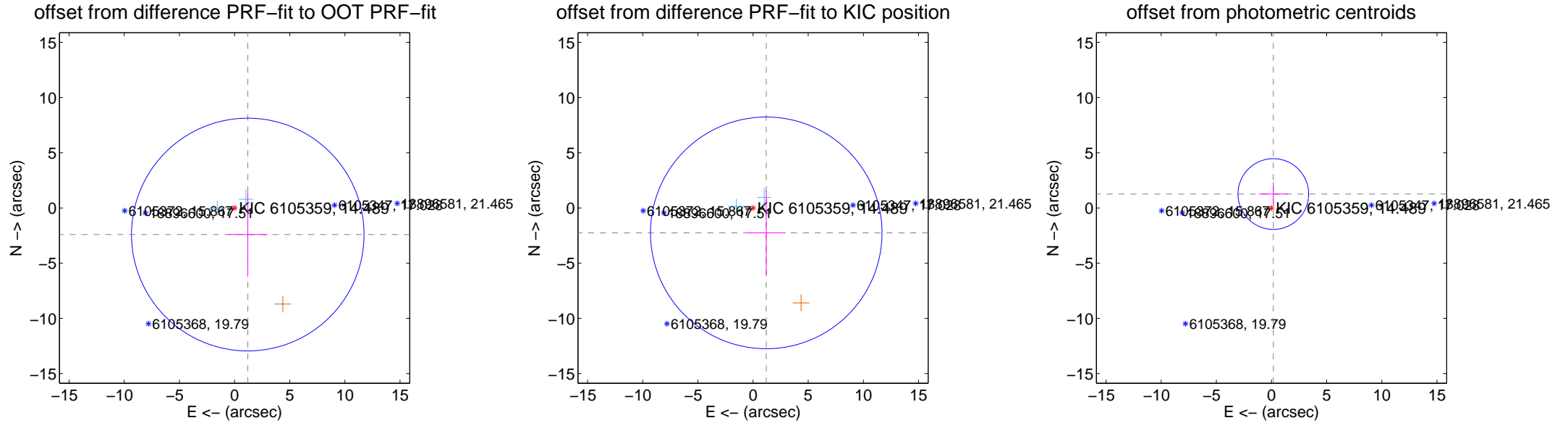
DV Centroid Data

Supplemental centroid analysis for 006105359-01. Kepler magnitude: 14.49. Transit SNR 7.21

There are 2 quarters with good PRF difference image offsets

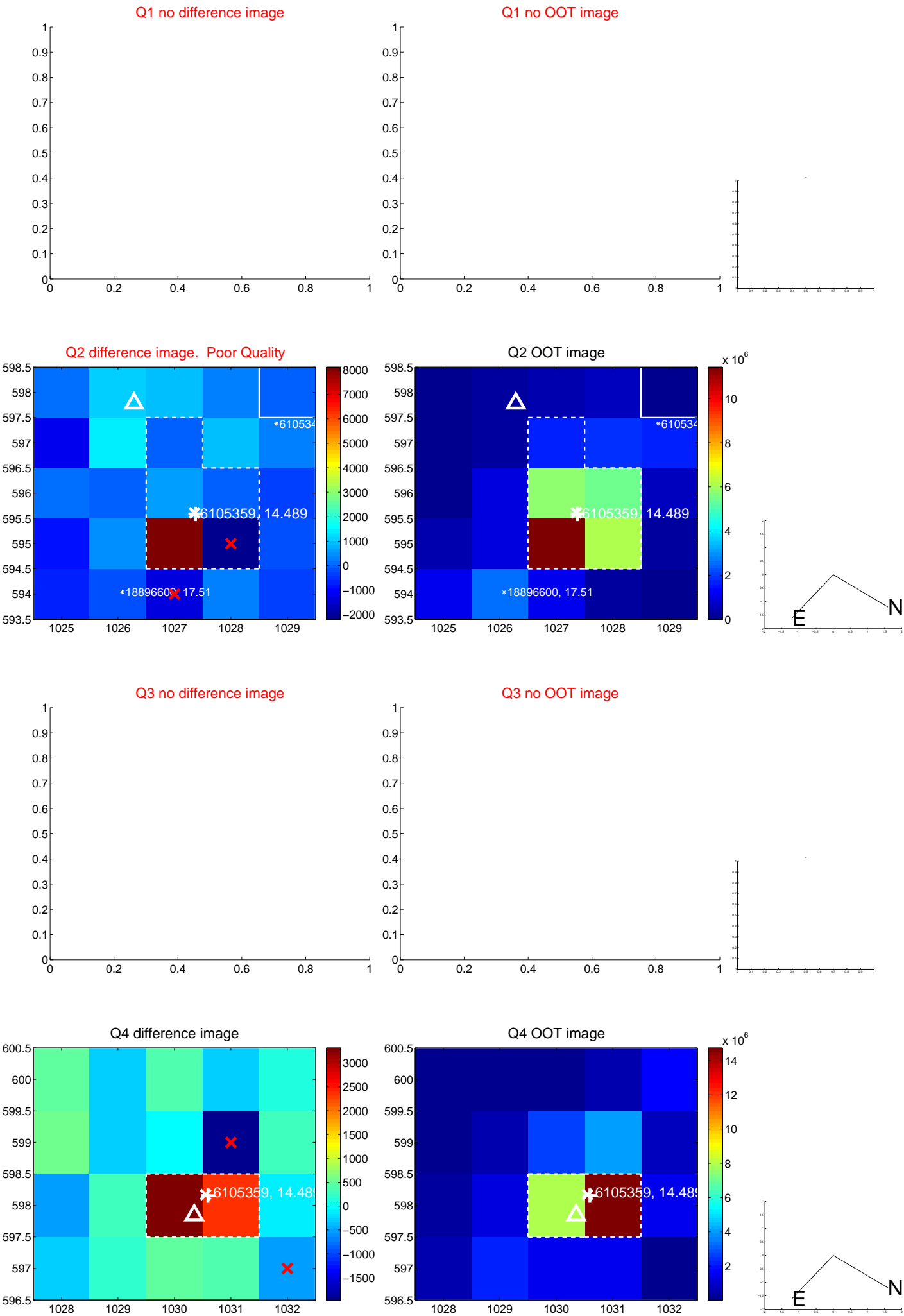
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.690 ± 3.513	0.77	-1.197 ± 1.764	-2.409 ± 3.824
PRF-fit source offset from KIC position	2.554 ± 3.498	0.73	-1.197 ± 1.746	-2.257 ± 3.849
photometric centroid source offset	1.27 ± 1.07	1.19	-0.16 ± 1.30	1.26 ± 1.06



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



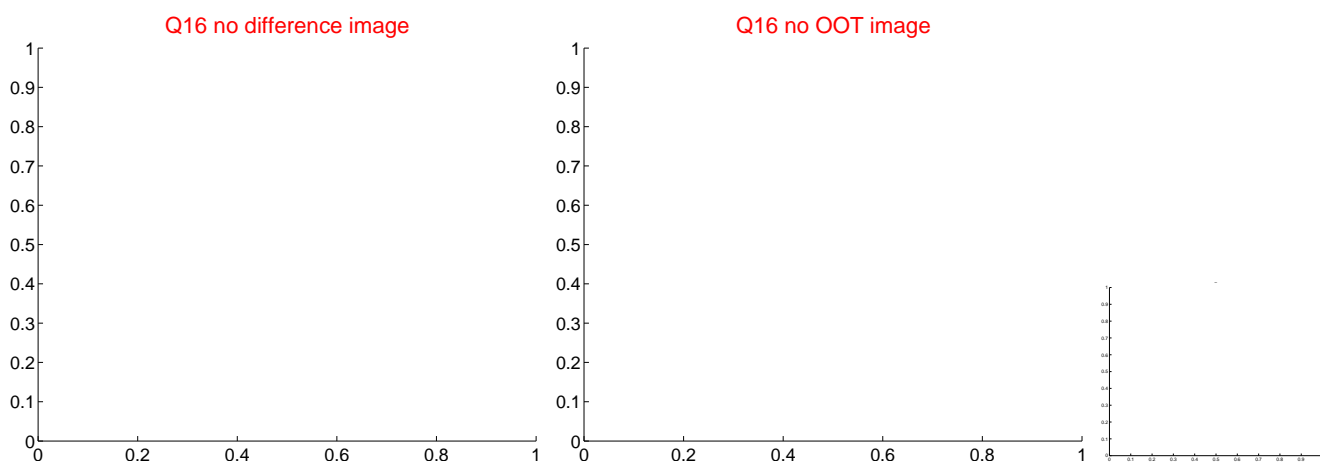
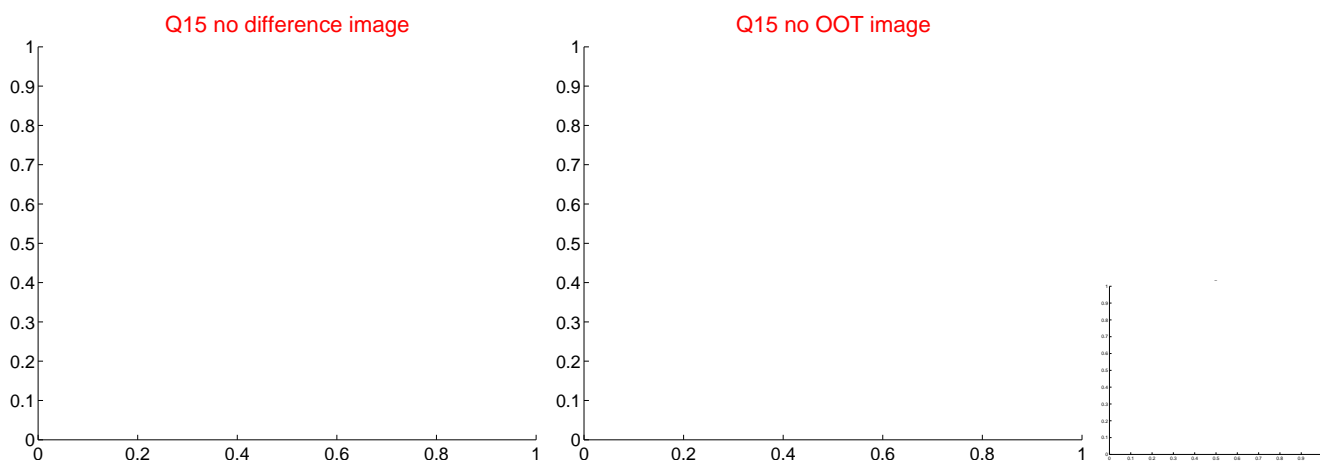
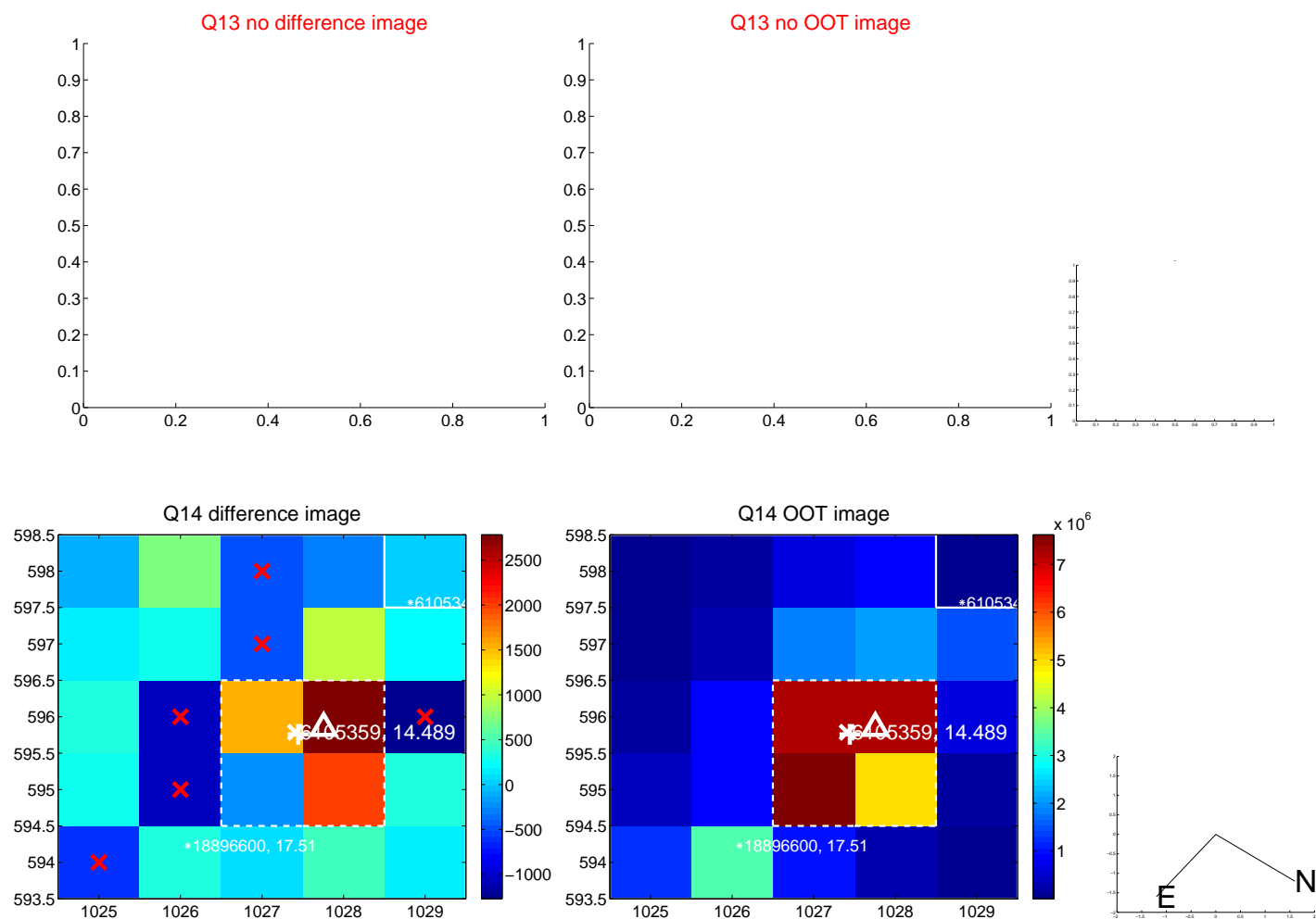
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



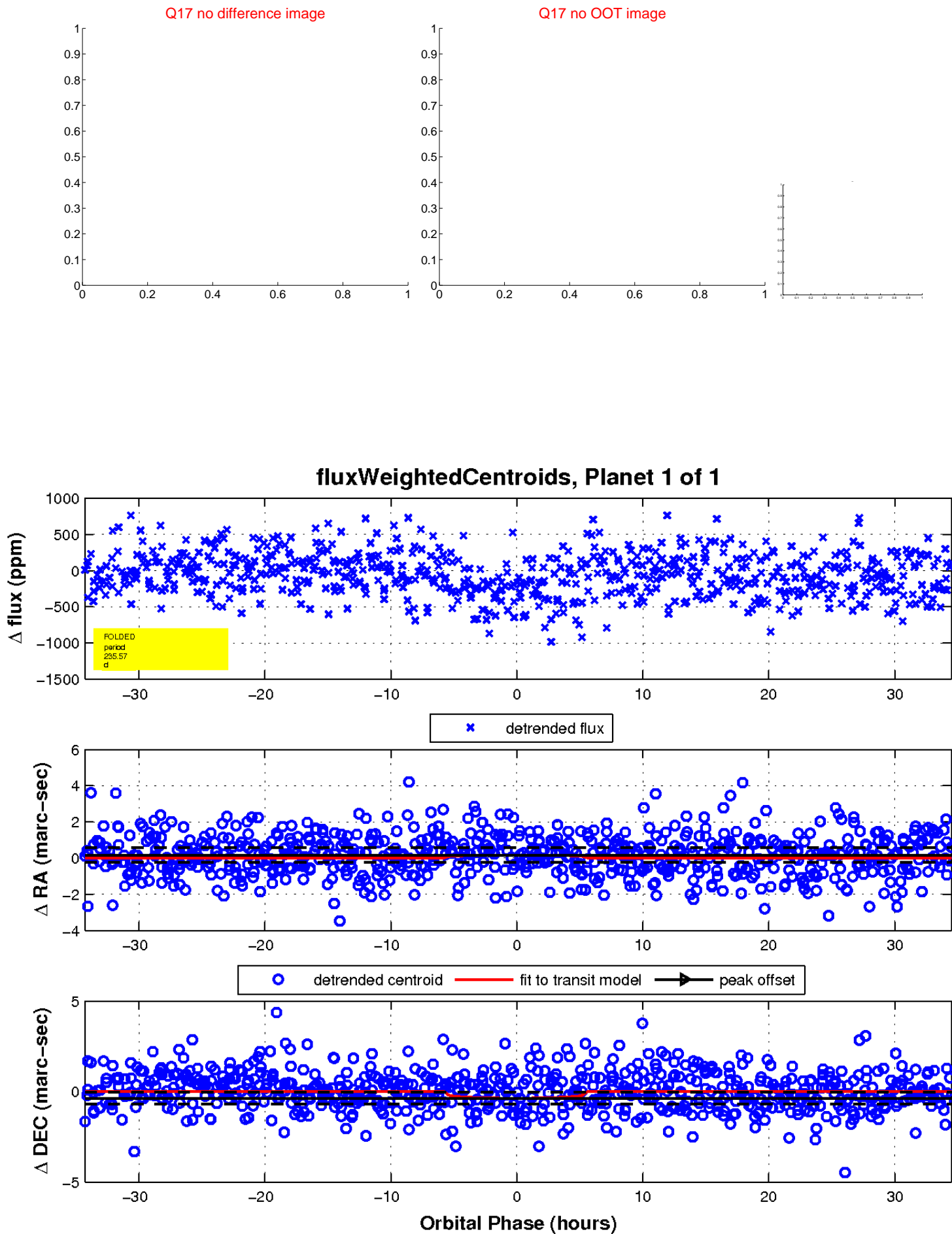
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

